IOTA SOFTWARE DOWNLOAD VIA AUXILIARY DEVICE

The present invention claims priority to United States Provisional Application Serial No. 60/310,511 filed August 6, 2001.

TECHNICAL FIELD OF THE INVENTION

The present invention is directed, in general, to software downloads to wireless communications devices and, more specifically, to wireless software downloads to wireless devices capable of accessing the Internet.

BACKGROUND OF THE INVENTION

As wireless communication devices such as mobile telephones and personal digital assistants (PDAs) become increasingly prevalent, the need for software downloads to such devices (e.g., to upgrade operating system software, update applications, or add after-market functionality) will also increase. Wireless communications devices capable of accessing the Internet (sometimes referred to as Internet Over The Air or "IOTA") are particularly likely to

require such software downloads. Wireless software downloads would be preferable in such cases to avoid the necessity of providing a separate Internet connection mechanism simply for software downloads.

5   Wireless performance of software downloads to wireless Internet-access devices is currently the subject of considerable effort, but standardization of such wireless downloads is challenging due to the wide disparity in technology employed by wireless devices. Wireless software

10   downloads may be achieved by a variety of means including file transfer protocol (FTP), trivial file transfer protocol (TFTP), etc. However, all of these methods require running the entire network protocol stack-- including the radio frequency (RF), call processing, and

15   transmission control protocol/Internet protocol (TCP/IP) layers--on the wireless communications device in order to download new software.

Moreover, the wireless device must include sufficient nonvolatile storage to store the newly downloaded software,

20   which in many cases will be a replacement for existing software and will therefore generally require at least twice the amount of storage as the current software. These requirements are significant since most wireless devices

are carefully designed to optimize storage for performance/cost trade-offs, and adding additional or spare storage specifically for download purposes will directly add to the unit cost in an unacceptable manner.

5   There is, therefore, a need in the art for an effective method of performing wireless software downloads to wireless communications devices, particularly resource constrained wireless communications devices capable of wireless connection to the Internet.

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